Romeo Attaché & Romeo Attaché Pro

Braille Embosser User's Manual

Enabling Technologies

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NOTE: This manual contains some preliminary release information regarding the features included in this product. Please check our web site for the latest manuals and product firmware.

INTRODUCTION

Even if you're experienced with Braille and computers, our embossers have lots of handy features that take only a few minutes to learn but make your work much easier and faster. That's why we hope to persuade everyone to read the short section called "Setting Up Your Embosser."

If you're new to Braille desktop publishing, "Your First Braille Document" describes the basic process of creating Braille in less than two pages.

To help you get the most out of your embosser both now and in the future, we've enclosed a CD-ROM that includes:

MANUAL.TXT   A text file version of the Romeo Attaché User's Manual suitable for use with most screen readers.

MANUAL.PDF   An accessible Adobe Acrobat version of the Romeo Attaché User's Manual.

USERMAN.BRF   A formatted grade 2 Braille file of the Romeo Attaché User's Manual 32 characters by 25 lines.

\DRIVERS\   This subdirectory contains the USB drivers needed by the Microsoft Windows operating system for the Romeo Attaché USB port.

And (sometimes)

README.TXT   Where we add things at the last minute that were too late for the manual!

Your First Braille Document

Many people think that a Braille embosser automatically prints "in Braille" from your computer files by substituting Braille letters for print ones. Although publishing in Braille gets easier all the time, it's not quite that simple yet.

The Braille alphabet evolved from a French military code designed for night reading and is based on a six-dot "cell." One "cell" stands for one letter, as you might expect, but not all the time.

More often, words have been shortened and punctuated according to rules unique to Braille. The rule systems are called "grades". Grade 1 Braille uses official Braille punctuation and capitalization but spells out every text letter of every word. Grade 2 Braille uses official Braille punctuation, capitalization, and nearly 200 contractions to save space.

Most documents for adult readers, as well as most signs in public buildings, are in Grade 2 Braille. The grade 2 contractions are understood by Braille readers everywhere and are abbreviations of common words and letter combinations. For example, "you" in grade 2 is the letter "Y".

Unless you're a Braille reader or a certified Braille transcriber, there is no way you could possibly know these rules. That's why you need a software package called a "translator." Translation software reads your computer files and literally "translates" them into correctly contracted, punctuated, and formatted Braille pages, ready to "print" on your Braille embosser. Newer translators even contain their own word processors so you can create, edit, spell check, print, translate, and emboss your documents inside the translator, just as you would in Microsoft Word or WordPerfect. Others produce Braille by reading common types of word processing files, typically in ASCII text format, and creating new ready-to-emboss Braille files. Translators are very easy to use and typically create the finished Braille computer files (even long ones) in seconds.

Once you're ready to emboss the Braille you've created, you can roughly estimate the finished size of most Braille projects if you keep in mind that even with grade 2 contractions AND the larger dimensions of standard Braille paper, 1 print page usually equals 2 to 3 Braille pages.

Glossary

Buffer:	Memory reserved to store data entered into the embosser. One page uses about 1K or 1000 characters of the buffer.
Configuration:	A collection of settings for a computer connection.
Default:	What you get if you don't change anything.
Emboss Head:	Mechanical element that makes the Braille dots.
Interface:	Connection.
Interpoint:	Braille characters on both the front and back sides of a single sheet of paper.
Menu:	A stored collection of settings in the embosser's memory.
NOV-RAM:	Nonvolatile memory. Stores menu settings while the power is off.
On-Line:	Ready to receive data from a computer USB, serial or parallel port.
Off-Line:	Ready to receive commands. Not ready to receive data from computer.
Parallel Port:	Connects the embosser to a computer with a Centronics type interface.
Parameters:	Settings.
ROM:	Read only memory. Contains the embosser "firmware" (permanent programming) of its features and functions.
Sequence:	A series of key strokes, usually followed by the Enter Key.
Serial Port:	Connects the embosser to a computer with a serial RS-232C Interface.
Top-of-Form Offset:	Top margin of Braille paper during embossing.
Tractor:	Moves the paper through the machine while printing.
Tractor Well:	Recess into which the tractors are installed.
USB Port:	Universal Serial Bus - Connects the embosser to a computer with this high speed connection.

SETTING UP YOUR EMBOSSER

Unpacking

First, check the embosser and accessories carefully for damage. If any damage is apparent, notify the shipper immediately. Also, check the contents against the packing list and if you find a discrepancy, let us know as soon as possible.

IMPORTANT! Please save the carton and the packing material! You will need this should you ever have to return the embosser for service. Although the embosser is in a very sturdy, shock-resistant case, shipping any electronic equipment without proper packing is not a good idea!

Place the embosser on a sturdy desk or table with the handle facing you. Plug the power cord first into the embosser's power interlock located on the right side panel, and then into a grounded outlet. (The embosser's power requirements are listed under "Electrical" in the "Technical Specifications" section later in this manual.)

Installing Paper

Your embosser will produce good quality Braille on paper weights from standard 20-pound computer paper (suitable for rough drafts) to 100-pound traditional Braille paper (recommended for more permanent documents).

Remove the paper from the box by turning the box upside down and stack the paper neatly on the floor in front of the table.

Lift the lid of the embosser by grasping it along the front edge and pulling upward until it latches. Open the embosser's paper tractors by lifting on the inside edge of each tractor door. They will stay open until closed by hand.

Insert the paper into the slot behind the paper tractors. Position the tractors so that the tractor pins line up with the holes on the edges of the paper (making sure the paper is straight).

To move the tractors from side to side, push the small release handles, located near the outside edge of each tractor, toward you. (They may be a little stiff at first.) Although both tractors are able to move, generally it is the right tractor that needs to be moved more often because that is how you adjust for differences in paper width.

Close the tractors to grip the paper and tighten the release handles back down to lock the tractors themselves in position. Check to be sure there is enough room behind the embosser to collect the paper. Close the lid of the embosser to cover the paper tractors.

Turn the power switch on. The embosser will execute a self test and plays the "Romeo & Juliet Polka". If you have the Romeo Attaché Pro, ET Speaks will come up talking automatically and tell you that the embosser is ready to run.

On the right side panel of your embosser, you'll find a standard one-eighth-inch headphone jack where you can plug earphones to listen in privacy. You can also connect this jack to a set of amplified speakers.

The Keypad

The keypad is a small 16-key keyboard in the center of the top of the embosser surface. The keypad is how you tell the embosser what to do. The keys are spaced 4 columns down by 4 rows across. The top three rows are laid out in calculator format with 7, 8 and 9 running from left to right on the top row, 4, 5 and 6 just below them, and 1, 2 and 3 next to the bottom. The key at the left of the very bottom row is 0. To the right of zero is the decimal point, and to the right of that, a key labeled E. The keys in the far right column are, from top to bottom, the OL, LF, FF and V key.

OL (On-Line/Off-Line)

The embosser must be on-line to receive and print data from a computer, and it (usually) must be off-line to receive commands from you.

Press OL to take the embosser from on-line (ready to receive and print data) to off-line (ready to respond to your commands). Press it again to return on-line. Note the audible difference in the on-line and off-line tones.

If you press OL while embossing, the embosser will pause. Any data left in the buffer remains, and embossing will resume as soon as you press OL again.

LF (Line-Feed)

LF is not used when the embosser is on-line. Off-line, LF advances the paper one line each time this key is pressed.

FF (Form-Feed)

FF is not used when the embosser is on-line. Off-line, FF advances the page to the top of the next page and prints the last partial page in the buffer, if necessary.

V (View)

On-line, V advances the page several lines, allowing you to read the line just embossed. Pressing V once more returns the paper to its original position. This feature is handy when you wish to verify the contents of a document that is currently being embossed.

E (Enter)

E is similar to the "enter" key on your computer keyboard and is used to finish and transmit commands.

Setting Top-of-Form

Top-of-form tells the embosser where the paper starts and where to begin the Braille. You need to tell the embosser to reset top-of-form whenever you change paper or adjust the top margin which, we call the top-of-form offset. The distance from the edge of the paper to where the Braille begins is adjustable in 0.1 inch increments by using the top-of-form offset setting (Parameter 30.NNE) found in each of the machine's 16 menus. For 25 lines embossed on 11 inch paper we generally recommend a top-of-form offset of 3 or 0.3 inches. The default setting is 0. To change it to 3 enter the following:

OL	Takes the embosser off-line
0.1E	Enter menu number 1. If you are using a different menu, substitute the alternate menu number for the 1 in the sequence
30.3E	This will set a top-of-form offset value of 3 or 0.3 inches. This setting will remain until you change it, even after power is turned off
1.1E	This will install the change and reset the embosser

If you have paper loaded in the embosser, check to be sure the tractors are securely holding the paper and that the paper can flow smoothly into the embosser with no obstructions. Turn on the embosser and listen for the "Romeo & Juliet" tune that signifies the embosser is ready to run.

To set top-of-form, enter the following on the embosser's keypad:

OL	Takes the embosser off-line
2E	Set top-of-form

An automatic sensor inside the embosser seeks the edge of the paper, so the paper should begin to move back and forth until the sensor fixes the location of the paper's edge in the embosser's memory. After setting top-of-form, the embosser returns on-line automatically, signified by the two-note on-line tune.

IMPORTANT!   The embosser's sensor *must* find the paper's edge to set top-of-form, which makes pages break in the right places. When you reset top-of-form in the middle of a printing session, remove any finished pages before issuing the 2E command. Every time you install a new batch of paper or clear a paper jam, remember to reset top-of-form with the OL, 2E sequence.

The embosser will remember the top-of-form setting when you move the paper with LF, FF or V.

Changing (and Restoring) Menu Settings

Because Braille embossers need to work with many different kinds of software and computer operating systems, the embosser has a built-in feature that remembers sixteen different groups of settings, exactly as if you were going to use sixteen different computers with one embosser.

Each group of settings is called a "menu." All the menus stay set and ready to use even when the power is off. Eight of the menus are preset at the factory with settings many of our customers have requested. The other eight are yours to create as you need them. You can change, create and save settings in all the menus, even the ones preset at the factory.

When you turn on your embosser for the first time, Menu 1 is the default (which means it has control until you change it). Menu 1 is for a parallel connection to an IBM-compatible computer.

Use your new embosser to print out a Braille graphic of the keypad and a Braille list of all sixteen menus and their settings, which are stored permanently in the Service Menu.

To print out the list (assuming you have put paper in the embosser, turned on the power, and set top-of-form), enter the following on the embosser's keypad:

OL	Takes the embosser off-line
0.0E	Enter the Service Menu (Menu Zero)
10E	Emboss a graphic representation of the keypad and all 16 user menu default settings stored permanently in the embosser's memory

You can stop the list during printing with the E key.

Each of the sixteen menus has the same features, many of which will be familiar to most computer users (like right and left margins, word wrap, and page length), while others are unique to Braille environments.

When the embosser is OFF-LINE and in one of the menus, you can make ET Speaks (if installed) tell you what the menu parameter is without changing anything. N. reads the menu parameters while in a menu. For example:

Should you change the right margin? You think you set it for 32 characters wide yesterday but you're not sure. Enter on the embosser's keypad:

OL	Takes the embosser off-line
0.1E	Enter Menu 1
14.	ET Speaks will read the current right margin setting, because 14 is the parameter assigned to the right margin
E	Press the E key if you do not wish to change the current setting. If you do wish to change the setting, enter the new right margin value now then press the E key. Each menu entry will be announced when the "." key is pressed

When you have finished making all of your changes to the menu enter:

1.1E	Exit the menu

How to Change Menu Settings

Because each menu contains over thirty different settings, sooner or later you'll want to make some changes when you need to use different paper, Braille formats or port connections.

For example, let's say you're using Menu 1 because you have an IBM PC-compatible. You want to adjust the right margin for narrower Braille paper. Enter the following on the embosser's keypad:

OL	Takes the embosser off-line
0.1E	Enter Menu 1
14.30E	Set the right margin at 30 Braille characters
1.1E	Return on-line and use this menu as the current configuration

A complete list of the thirty-plus individual menu items is also in the Quick Reference Guide in the back of this manual.

Restoring Factory Settings

If you change too many menu parameters to keep track of, or if you're not the only person to use the embosser, you might want to reset the embosser back to the original factory settings. Although you will lose all changes you've made to the menus, you'll also be starting fresh.

OL	Takes the embosser off-line
0.0E	Enter the Service Menu
95E	Restore the factory default settings
1E	Reset the embosser

Connecting To Your Computer

Note: Only one port should be connected to the computer at any given time.

Through the Parallel Port

Connect the parallel cable we supplied (or one you already have) from one of the parallel ports on your computer to the parallel port on your embosser. If you have been using a print printer, it is likely to be already connected to your computer's first parallel port, so look for the second parallel port to connect to the embosser. It doesn't matter which parallel port you use, so long as you remember which one it is. Turn on the computer and the embosser. Please proceed to the section titled **Installing Drivers in Microsoft Windows**.

Through the USB Port

The USB port can be connected to your Windows 98 or higher computer. Turn on your embosser and first configure the machine to use the USB port. Enter the following sequence on the keypad:

OL	Takes the embosser off-line
0.3E	Enter menu number 3. Please note that menu number 3 contains all the defaults for using your Romeo Attaché via the USB port for the Microsoft Windows operating system
1.0E	Select menu number 3 as the power on default menu
1.1E	Installs the change and resets the embosser

With both the computer and the embosser turned on and ready, insert the USB cable into the embosser's USB port located on the right side panel of the machine. Connect the other end of the cable to any available USB port on the computer. Depending on the version of Windows you have, the New Hardware Wizard should detect the embosser and prompt you for a driver disc. Select Have Disc and direct the wizard to the \DRIVERS\ subdirectory located on the CD-ROM provided with your embosser. Follow all default prompts to install the drivers.

Note: Our USB drivers may also be downloaded from our website at http://www.brailler.com.

Once you install the USB driver, your USB port will appear as a "Virtual Com Port", as though the USB port were another RS-232 serial port. On most computers it will appear as "COM4". To verify this go to START, SETTINGS, CONTROL PANEL on your Windows desktop. Double click on the SYSTEM icon, select HARDWARE AND DEVICE MANAGER, then open Ports Com & LPT. The embosser serial port should appear here.

Please note that in some versions of the Windows XP operating system, the embosser may be detected automatically and a default USB driver is installed. If this occurs you must update this driver with the one included with your embosser. To do this, right click on the Com port shown in the Device Manager and select Update Driver. Follow the hardware wizard as described above to update the virtual Com port driver with the one provided.

Once you have verified the port number of the embosser's virtual Com port, and updated the driver, if necessary, you should check to be sure that all Com port settings are correct before closing the Device Manager. To do this, right click the embosser's Com port and select Properties. Select the Port Settings tab, and make sure the Com port is set as follows: 9600 baud, no parity, 8 data bits, 1 stop bit, and hardware handshaking (or flow control). If your port settings do not match the ones listed here, make any necessary changes at this time. Next, click OK, and close the Device Manager. Please proceed to the section titled **Installing Drivers in Microsoft Windows**.

Through the Serial Port

If you need to set up a serial connection, first connect a serial cable (preferably the one we sent with the embosser) to the embosser's serial port and to one of the serial ports on your computer. Since computers usually have more than one serial port, make a note of which one the embosser is using. You'll need this information to set up your translation software and adjust your computer's settings, if necessary.

If your computer is an IBM-compatible, set your computer's serial port for: 9600 baud, no parity, 8 data bits, 1 stop bit, and hardware handshaking. Next, set the embosser to match, using Menu 2:

OL	Takes the embosser off-line
0.2E	Enter Menu 2
1.0E	Sets menu number 2 as the power on default menu
1.1E	Exit menu and reset embosser

This will set the embosser for 9600 baud, 8 data bits, no parity, 1 stop bit, and hardware handshaking.

If you are connecting via the serial port to a Notetaker, first set your Notetaker for: 9600 baud, 8 data bits, no parity, 1 stop bit and software handshaking. Then change the embosser settings to match:

OL	Takes the embosser off-line
0.2E	Enter Menu 2
8.0E	Set the embosser to software handshaking
1.1E	Exit Menu 2 and reset embosser

If you already have a clear idea that something else should be changed in the embosser's serial port settings (baud rate, handshaking, etc.), the Quick Reference Guide in the back of this manual has a list of the menu items you can adjust for the serial port.

Try sending a short file using whatever copy, transmit or print command your computer or software requires to test the connection. For the IBM PC, from the DOS prompt, the command to send the file to the first serial port is:

```
copy mydoc.brf com1: [Return]
```

Assuming you have connected the computer and the embosser as described above, and fully installed your translation software, you can expect to get Braille out immediately. Please proceed to the section titled **Installing Drivers in Microsoft Windows**.

Installing Drivers in Microsoft Windows

Installing the Generic Text Only printer driver is required for many Windows applications. Select START, CONTROL PANEL, PRINTERS AND FAXES from the Windows desktop. Select Add Printer from the open window. Scroll through the list of available printers and select Generic Text Only. Follow the prompts displayed for your specific version of Windows. Please note that each version of the Microsoft Windows operating system has a slightly different format for installing printers. Select Local Printer attached to this specific computer. When prompted select the port your embosser is connected to on this computer. Typically lpt1 for parallel connections, com1 or com2 for serial connections and com4 for USB connections. If you plan to use the embosser with MS-DOS applications tell Windows to make this the Default Printer. When the wizard closes select NO to the Print Test Page question.

If you are using newer translation or transcription software such as DBT from Duxbury Systems to emboss your work, install the translation software package on your computer. Then open the program and select Global, Embosser Setup. Click New and select "Enabling Romeo Attaché." Then, select Write to Port and select the port your Romeo Attaché is connected to on your computer. For parallel connections this is usually lpt1; for serial connections com1 or com2. If you are using the USB port with Duxbury DBT, select Send to Printer instead of Write to Port and, using the scroll down bar, select the Generic Text Only printer. Finally, click OK. DBT will automatically send your finished Braille work directly to the embosser.

If you have older transcription or translation software that creates files without sending them to the embosser, you have to copy the final, formatted Braille files to the embosser yourself. Before you can do this in the Windows operating system, you must first install the Generic Text Only printer driver in the printers folder of Windows. Simply select the Add Printer icon found in the Printers folder, select Generic Text Only and follow the default prompts to install the driver for the parallel port that has the embosser attached. Right click or select the properties for the Generic Text Only printer driver and set it as the Default Printer.

From the DOS prompt you may now send your Braille files to the embosser. The command to send files to the first parallel port is:

```
Copy mydoc.brf lpt1: [Return]
```

If you're connected to the second parallel port, the command is:

```
Copy mydoc.brf lpt2: [Return]
```

Menu 1 is already set to work with the embosser's parallel port and IBM PC-compatible computers. Assuming you have connected the computer and the embosser as described above, and fully installed your translation software, you can expect to get Braille out immediately.

If not, check to make sure the cables are tightly attached, the software (or DOS commands) are transmitting to the correct port, and the embosser is on-line.

Advancing Paper

If the test of your USB, parallel or serial port above was successful, you now have some Brailled pages to remove from the embosser.

Enter the following commands on the embosser's keypad to remove the finished document and prepare for the next:

> OL Takes the embosser off-line
> FF Advance a full page. The embosser may finish the last fraction of a page. Tear off the finished pages. Then:
> 2E Reset top-of-form and send the embosser back on-line, ready for the next job

If embossing did not start as you expected, first rule out the obvious: Is everything plugged in, turned on, and directed to the port connected to the embosser? Is the embosser on-line? If these all check out, scan the section entitled "Problems?" later in the manual. We've included solutions to the most frequent complications our customers encounter.

GRAPHICS

Braille graphics are made using special software packages. For more information on producing tactile graphics using your embosser, contact your Enabling Technologies representative.

ET SPEAKS (Romeo Attaché Pro)

ET Speaks and Your Embosser

As you've noticed if your embosser is equipped with ET Speaks, your embosser automatically voices all the keypad entries you make and all its own status messages with no intervention necessary from you.

Enter the menu entry number, such as 30.E (Top-of-Form Offset), while in any menu to have ET Speaks read you a menu setting without changing it.

Turn Speech Off and Change Voices In The Embosser Menus

For embossers equipped with ET Speaks, all sixteen menus have the following additional settings to modify the speech:

25.0E	Turns the speech OFF
25.1E	Turns the speech ON (the default)
36.NE	Chooses a different voice by substituting a number from 0 to 5 for the "N". 0 is the default (i.e., 36.0E)

Example: You use an IBM-compatible computer and have your embosser connected to one of the computer's parallel ports. You want to turn the speech off. To do this, turn on the embosser. Then, on the embosser's keypad, enter:

OL	Takes the embosser off-line
0.1E	Enter Menu 1. (Menu 1 is the factory menu preset for the IBM PC connected to the parallel port. This is probably the menu you have been using)
25.0E	Turn speech off
1.1E	Save these menu changes and exit to go on-line

The embosser will now work with "speech off" in Menu 1, unless (or until) you change it.

To turn the speech back on, do all the steps above, except instead of 25.0E (which turned the speech off) enter 25.1E to turn speech on.

Remember, in a menu, you can check parameters without changing them by entering N.E to have ET Speaks tell you the current setting.

In the above example, suppose you want to check to make sure the speech is really on before resetting the embosser. While anywhere in Menu 1, enter 25.E on the keypad to hear the current speech setting.

Change Speech Characteristics In The Service Menu

All our embossers come with a special Service Menu that contains various testing and maintenance functions, like restoring factory defaults, running dot test patterns, and so forth. Embossers equipped with ET Speaks have

additional functions in the Service Menu to enable you to change some of the speech features of the voice now active. The Service Menu's keypad code is OL then 0.0E.

50.NE	Set ET Speaks' volume (0E lowest to 9E highest)
51.NE	Set ET Speaks' speed (0E slowest to 9E fastest)
52.NE	Set ET Speaks' tone (0E bass, 1E mid-range, 2E treble)
53.NE	Set ET Speaks' frequency (0E lowest to 9E highest)
54.NE	Set ET Speaks' pitch (0E lowest to 9E highest)
55.NE	Set ET Speaks' intonation, which is how much expression should be implied by punctuation (0E least to 9E most)
56.NE	Set ET Speaks' articulation, which is the amount of distinctive separation between words (0E least to 9E most)
57.NE	Set ET Speaks' reverb (0E none to 9E most)
58.NE	Set ET Speaks' pause between words (0E shortest to 9E longest)
59.NE	ET Speaks reads the settings above (stop with the E key)
1E	Exits the Service Menu

Example: You want to maximize the "reverb" to see what it sounds like. Enter these commands on the embosser's keypad:

OL	Takes the embosser off-line
0.0E	Enter the Service Menu
57.9E	Set Reverb to the maximum
1E	Exit the Service Menu

Back to normal? Repeat all commands above EXCEPT replace 9E with 0E.

SINGLE SHEET MODE (Romeo Attaché Pro)

Single Sheet Mode is an option that may have been installed at the factory so that your embosser will emboss Braille on loose sheets of paper or other lightweight material. With Single Sheet Mode, you Braille the document by feeding paper through the embosser one sheet at a time. Single sheet mode makes it possible for you to use paper that does not have the tractor edges of standard Braille paper.

IMPORTANT! In Single Sheet Mode, the maximum number of lines that can fit on a page is 22. Format translated documents for 22 or fewer lines per page for best results. All menu changes must be finished before starting to print in Single Sheet Mode.

Entering menus while off-line exits the Single Sheet Mode, as does turning the machine off.

Single Sheet Mode Basic Steps

Place the first sheet of paper on the tractor rollers. Turn on the embosser. Enter the following on the embosser's keypad:

OL	Takes the embosser off-line
0.1E	Enter Menu 1 (or any menu you happen to be using, as Single Sheet Mode works with any menu)
17.22E	Set the number of lines per page to 22
11.1E	Turn on perf skip
1.1E	Exit menu and reset embosser

Also on the embosser's keypad, set top-of-form:

OL	Takes the embosser off-line
2E	Set top-of-form and return on-line

Enter 5.1E on the keypad while staying on-line. 5.1E activates the Single Sheet Mode. Begin embossing by sending your file from your computer. When the printer encounters a form-feed control character or reaches the set number of lines per page, the printer will feed the current sheet out of the rollers. Make sure the first sheet is clear of the rear of the printer, then place the next sheet in the tractor rollers.

Stay on-line. Enter 2E on the keypad to set the top-of-form. (2E works on-line in Single Sheet Mode.) The second page will now emboss. Repeat this sequence until the entire file has been embossed.

Leave Single Sheet Mode by entering 5.0E on the embosser's keypad. 5.0E ends the Single Sheet Mode and turns the paper-out sensor back on. Reset the menu to your usual perf skip and lines-per-page settings.

IMPORTANT!   Single Sheet Mode automatically disables the paper-out sensor, so the printer could continue to emboss even when no material is between the die bars. Since embossing without paper can eventually damage the embosser, close supervision is important in the Single Sheet Mode.

PROBLEMS?

Quality Braille desktop publishing requires harmony between your word processor, translator, computer and embosser. Enabling Technologies has been helping people learn to use Braille embossers and translators for nearly thirty-five years, so we've observed many times that formatting and transmission problems can arise even when the embosser is working perfectly. Also, many of the common-sense preparations that ensure good results with any computer system apply in Braille production as well.

Productivity improves dramatically if people using the system get enough practice to become comfortable with their computers, keep important manuals handy in case of questions, and plan sufficient time for a little trial-and-error with complex projects. If possible, more than one person in the office or agency should know how to perform important computer tasks.

We get some of the same questions repeatedly, so we've included them below. If you have a problem not covered here, call our toll free Customer Support phone number at 1 (800) 777 3687 or 1 (772) 225 3687 for international customers. We will be equally pleased to help you OR to learn from your experience.

With the Embosser

Q. Could I have a bad parallel cable? The embosser makes the right tones, the computer sends data--but nothing happens!

A. First press the OL key, then the FF key to rule out the possibility of a partial page left in the buffer. If nothing embosses, then check the integrity of the cable connection by trying an exact replacement if you have one. If you have a print printer nearby with a parallel cable attached, borrow it temporarily, and attach it between the computer and the embosser. If the cable was at fault, the borrowed cable will fix the problem. If nothing still happens, eliminate the cable from your list of suspects, since it is unlikely that you have two "bad" cables. Make sure your parallel port hasn't been redirected via a mode command buried somewhere in your autoexec file. Also, be sure that you aren't inadvertently connected to a second parallel port.

Q. Could I have the wrong serial cable connected between embosser and computer, or are all serial cables the same?

A. You could easily have the wrong cable connected, although we try to find out what type of serial connection you require when preparing your order to

avoid this very problem. If you have followed our earlier directions for matching serial parameters, and the embosser is not responding to a transmit or print command, make sure the cable involved is the one that came with the embosser. Then check to be sure it is connected to the computer serial port where the data is being routed. Many systems have more than one serial port. Also, take a careful look at the serial port settings on your computer, because if any of these are different than you expect, this could be the source of trouble. But if everything checks out as it should and you are unable to get data with the cable we supplied, call us; one way or another, we will help you puzzle out the problem.

Q. I get characters from the embosser all right, but they are mostly the letter x and they don't seem to have many spaces. Could the Braille translator be messing up my document?

A. This sounds more like a baud rate error. The embosser and your computer are probably set to different baud rates. Change the one which is easier to adjust. Since the baud rate or speed of data transfer cannot be set or changed in a parallel interface, the most likely cure for "garbage" characters in a parallel printout is to try a different parallel interface cable.

Q. Could it be that this Braille embosser doesn't understand grade 2 Braille? The words have no contractions, and the punctuation doesn't look right.

A. The embosser prints exactly what the computer sends. In order to produce well formatted grade 2 Braille, your files must pass through a translator program, which creates an entirely new file in Braille. If you have translation software on your computer, there may be some reason why it is being bypassed. If you do not have Braille translation software installed on your computer, call us at ETC for information about prices and features. (We have worked with most of the translators currently on the market.)

Q. What causes the embosser to skip a blank page after each full page?

A. The lines per page in your document most likely exceeded the lines per page setting on the embosser. The embosser automatically sends out a form-feed if the lines per page exceeds the value set with 17.NNE in all menus. You may also want to turn off a feature called "perf skip," which keeps the pages neatly divided if your software doesn't add page breaks, in your embosser's current menu. Assuming that menu 1 has control of your embosser, the following sequence turns perf skip off:

        OL   Takes the embosser off-line
      0.1E   Enter Menu 1

11.0E	Turn perf skip off
1.1E	Make this change current now and reset embosser

Q. Top-of-form won't stay set; it drifts on longer documents.

A. In the embosser's menu, turn on perf skip and set lines per page to 17.27E BUT on your computer, translate your document to only 25 lines per Braille page. The embosser sequence is:

OL	Takes the embosser off-line
0.1E	Enter Menu 1 (as an example)
11.1E	Turn perf skip on
17.27E	Put 27 lines of Braille on a page
1.1E	Make these settings current

Remember to change your translator settings to 25 lines per page and try the document again.

Q. I get the first line of a document but the rest is blank. How could that happen?

A. Usually your Braille translator regulates the length of your lines and pages. But some programs and some devices, such as Notetakers, allow you to set line and page length to zero, because the embosser can also take care of these format considerations by itself. If you receive one line of a document followed by a lot of blank space, the problem may be that there are no line or page endings in your document. To have the embosser do the formatting, you need to turn on the right features in the menus. From the embosser's keypad, enter the current menu and:

11.1E	Turn on perf skip
10.1E	Turn on word wrap
22.1E	Turn on hot zone
1.1E	Reset embosser and use these settings

These parameters are already factory-set in menu 4. However, this menu is set up for serial transfers where the host device provides absolutely no formatting, and this may or may not correspond exactly to your situation. Try menu 4 first without changes and if necessary, experiment a little (you can always reset the embosser) until you have the format you want.

The problem could also be the absence of line-feeds in your file. Some devices and programs provide the option of ending each line with a carriage return but no line-feed. The embosser needs a line-feed paired with each carriage return. If line-feed characters are in your document but the

embosser is not acting on them, check the manual of your translator if you are using one, or your Notetaker if this is your host device. There should be an option which allows you to specify whether line-feeds should be transmitted after each carriage return.

Q. Is there a way I can turn the Braille down? Sometimes, it tears through the paper when we use the thin paper designed for the standard printer in the office.

A. Due to the wide variations in paper styles, switching from heavy to light paper or just changing from one variety of paper to another, may involve several changes to the embosser's settings. Therefore, we recommend that you contact our Customer Support Group for specific suggestions related to your particular application.

All of the examples apply equally to programs such as Edgar, MicroBraille and PokaDots, which are designed to receive grade 2 Braille entered by a skilled transcriber, and transmit the finished product to a disk file or an embosser.

TECHNICAL SPECIFICATIONS

Printing
Printing method: Impact. Printing speed: 15 characters per second, 32 characters per line. Actual printing speeds may vary based on paper grade setting, page layout and data format. Printing direction: Bidirectional. Line width with default Library of Congress spacing: Alpha 32 characters (maximum). Graphics: low resolution 48 characters maximum (96 Dots or 12.5 dots per inch). Graphics: high resolution 64 characters maximum (128 dots or 16.7 dots per inch) Dot spacing: Alpha 0.090 inch. Graphics 0.080 inch. Dot height: 0.020 inch. Character matrix: 6 dot or 8 dot. Character sets: USA default (8 total). Character spacing: 0.240 inch. Line spacing 6 Dot 0.400 inch. 8 Dot 0.490 inch. Spacing formats selectable: Regular (Library of Congress), California sign, Jumbo, Regular with relaxed line spacing, Petite (Japanese), and Petite with relaxed line spacing for interline printing. Paper feed: Sprocket. Paper width: Adjustable (1.5 to 8.5 inches). Page length: Selectable (3.0 to 14 inches) Paper weight: 20 lb. to 100 lb.

Physical Description
Width: 17 inches (43.18 cm). Depth: 11.25 inches (28.58 cm). Height: 5.75 inches (14.06 cm). Weight: 16.75 pounds (7.6 kg). Case Style: Desktop, with handle. Sound Level: 67 dba average. Sound level may vary with ambient conditions.

Environmental
Temperature: Operating or Storage 35 F to 100 F (2 C to 37.8 C). Humidity: Operating or Storage 10% to 95% (noncondensing).

Electrical

Line voltage: USA 110 to 230 VAC, 50/60 Hertz, Amperage: 0.8 Amp average, Fuse size: MDL 1.6, Watts: approx. 50. Energy Star Low Power Mode: 4 watts.

Interface

Port 1: Centronics compatible parallel. Port 2: Serial EIA-232D (DTE). Port 3 USB 1.1, serial.

Service

User maintenance: None required. MTBF (excluding print head): 50,000,000 characters. Print head life: 100,000,000 characters.

Accessories

Standard: Line cord, 3 wire (USA). Parallel interface cable. Optional: ET Speaks. Single Sheet Mode. Optional Accessories: Special interface cables. Special AC line cords. Carrying Case. USB Port Cable.

Special Features

1. Fully configurable print format
2. Fully configurable communications
3. Sixteen independently selectable configuration menus plus a special service menu
4. Configuration stored in nonvolatile RAM
5. Graphics capability
6. Computer Braille or grade 1 translation built in
7. Six or eight dot Braille codes
8. Eight Braille character sets
9. User definable Braille codes
10. Paper-out detector
11. Special view feature allows reading the current line
12. Word wrap and hot zone formatting
13. Two screen dump modes
14. Vertical printing capability
15. No user maintenance required
16. All modular construction
17. Dynamic Braille Scaling allows size adjustment in Braille cell size and spacing from Regular Library of Congress (default) to California Sign, Jumbo, Regular with Relaxed Line Spacing, Petite (Japanese) and Petite Relaxed (Japanese Interline) Braille sizes
18. EPA ENERGY STAR® compliant

FCC Compliance

WARNING: Changes or modifications to this unit not expressly approved by Enabling Technologies Company could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

QUICK REFERENCE GUIDE

Keys

OL	On-Line/Off-Line (toggle)
LF	Line-Feed
FF	Form-Feed
V	View (toggle)
0-9	Numeric entry
Decimal	Numeric entry
E	Enter

Top-of-Form Reset

Do this after you change menu settings or add paper.

OL	Takes the embosser off-line
2E	Set top-of-form. Embosser resets automatically

Menus

Enter a Menu

OL	Takes the embosser off-line
0.NE	Go to menu N (1 through 16)

Menu Settings & What They Do

1.0E	Make this menu the power-on default
1.1E	Exit and make this menu current
2.0E	Selects serial port
2.1E	Selects parallel port
2.2E	Selects USB port
3.NE	Sets baud rate to N where N = 1 for 9600, 2 for 19,200, 3 for 38,400, 4 for 57,600 or 5 for 115,200
4.NE	Reserved
5.NE	Reserved
6.NE	Reserved

7.NE	Reserved
8.NE	Sets handshake to N where N = 0 for Xon/Xoff or 1 for hardware
9.NE	Sets Braille mode to N where N = 0 for 6 dot or 1 for 8 dot
10.NE	Word wrap (0 = off, 1 = on)
11.NE	Perf skip (0 = off, 1 = on)
12.NE	Paper-out detector (0 = off, 1 = on)
13.NE	Reserved
14.NNE	Set right margin to N (2 to 32)
15.NNE	Set left margin to N (1 to 31)
16.NE	Emboss control characters (0 = off, 1 = on)
17.NNE	Set lines per page to N
18.NNE	Set page length to N (3 to 14 inches in 1.0 inch increments)
19.NE	Set multi strike count to N (1 to 5)
20.NE	Enter character N into control character table
21.NE	Remove character N from control character table
22.NE	Hot zone (0 = off, 1 = on)
23.NE	Recognize escape sequences (0 = off, 1 = on)
24.NE	Reserved
25.NE	(Optional) ET Speaks (0 = off, 1 = on)
26.NE	Reserved
27.NE	Braille format (0 = computer, 1 = grade 1)
28.NE	Eighty column mode (0=off, 1=80 column, 2=160 column)
29.NNE	Alpha character set (0=none, 1=IBM 437, 2=IBM 850, 3=Spain, 4=France, 6=Portugal). (0=USA, 1=Spain, 2=Germany, 3=Swiss, 4=Denmark, 6=France, 7=Italy)
30.NNE	Top-of-form offset to NN (1/10 inch increments)
31.NE	Eight bit character handling (0=print 8 bit chrs, 1=ignore eighth bit, 2=print space, 3=discard)
32.NNE	Autoprint constant (1 second increments)
33.NE	Reserved
34.NNE	Paper grade setting (0=fastest, 12=slowest)
35.NE	Dynamic Braille Scaling: 0=Regular (Library of Congress), 1=California sign, 2=Jumbo size, 3=Regular size, relaxed line spacing, 4=Petite (Japanese), 5=Petite with relaxed line spacing for interline printing
36.NE	(Optional) ET Speaks voices (0=default, or 1, 2, 3, 4, or 5)
40.NNE	Set on time or solenoid impact (1 to 80)

Other Menu Functions

    N.E   Reads (with ET Speaks) parameter N in this menu
    VE   Prints all parameters in the current menu

Exit A Menu

    E   Exits but remains off-line
    1.1E   Exits and makes this menu current

Restore Menus to Factory Defaults

    OL   Takes the embosser off-line
    0.0E   Go to the Service Menu
    95E   Restore the factory default settings
    1E   Reset the embosser

ET Speaks (Romeo Attaché Pro)

Check menu parameters without changing them by entering N.E while in the menu. ET Speaks tells you the current setting.

Single Sheet Mode (Romeo Attaché Pro)

Reminder: Translate document to 22 lines per page.

Place the first sheet of paper on the tractor rollers. Turn on the embosser. Change the following settings in whatever menu you are using:

    17.22E   Set the number of lines per page to 22
    11.1E   Turn on perf skip
    1.1E   Exit menu and reset embosser

Also on the embosser's keypad, set top-of-form:

    OL   Takes the embosser off-line
    2E   Set top-of-form and return on-line

Enter 5.1E on the keypad while staying on-line. Send your file from your computer. After the first completed sheet ejects, stay on-line. Insert the next sheet. Enter 2E on the keypad to set the top-of-form. (2E works on-line in Single Sheet Mode.) Repeat until the entire file has been embossed. Leave Single Sheet Mode by entering 5.0E on the embosser's keypad.

Service Menu

This menu contains special functions often used in the testing, aligning, and troubleshooting of the embosser by service personnel, but some are also useful in daily operation.

You enter the service menu by going off-line with the OL key, then typing 0.0E. Some of the functions exit automatically when they are completed, and these are labeled "Auto" in the right most column. The others will remain active until you press any key to stop them. Leave the Service Menu by pressing the E key until you hear a series of beeps, which brings you back to the off-line level.

SEQUENCE	FUNCTION	EXIT
1E	System reset	AUTO
2E	Print test pattern (E 5 pattern)	ANY KEY
3E	Print 6 dot pattern (equal signs)	ANY KEY
4E	Carriage motor on high power	ANY KEY
5E	Line-feed motor on high power	ANY KEY
6E	Top-of-form sensor test (tone)	ANY KEY
7E	Paper-out sensor test (tone)	ANY KEY
9E	Print test documentation	ANY KEY
10E	Print keypad and all settings	ANY KEY
15E	Press 1 to print out firmware revision number. With ET Speaks, firmware revision number is announced	AUTO
30E	Print high resolution test page	AUTO
31E	Print medium resolution test page	AUTO
40E	Home sensor offset (0=negative, .=positive step)	E KEY
49E	Carriage break-in test	ANY KEY
50.NE	Sets beep tone volume, 0E=off, 1E=1/2, 2E=full	AUTO
84E	Activates home carriage delay (0E-7E)	AUTO
89E	Activates carriage delay (0E-12E)	AUTO
90E	Activates delay before emboss routine (0E-12E)	AUTO
91E	Activates delay before emboss in Jumbo (0E-12E)	AUTO
95E	Load defaults into NOV-RAM	AUTO

Parameters 50 through 58 are optional settings for the Romeo Attaché Pro with ET Speaks:

50E   Set ET Speaks' volume (0E lowest to 9E highest)
51E   Set ET Speaks' speed (0E slowest to 9E fastest)
52E   Set ET Speaks' tone (0E bass, 1E mid-range, 2E treble)
53E   Set ET Speaks' frequency (0E lowest to 9E highest)
54E   Set ET Speaks' pitch (0E lowest to 9E highest)
55E   Set ET Speaks' intonation, which is how much expression is implied by punctuation (0E least to 9E most)
56E   Set ET Speaks' articulation, which is the amount of separation between words (0E least to 9E most)
57E   Set ET Speaks' reverb (0E none to 9E most)
58E   Set ET Speaks' pause between words (0E shortest to 9E longest)

WARRANTY, SUPPORT & SERVICE

Enabling Technologies Company warrants all parts and workmanship of the embosser to be free of defects for a period of one year (365 days) from date of delivery. This warranty is extended only to the original purchaser who must return such defective part(s) to Enabling Technologies Company immediately upon customer's discovery of the defect in question. Return shipment of such defective part(s) must be pre-paid by customer.

This warranty does not extend to defects resulting from improper use or unauthorized service by purchaser. Also, the warranty is invalid if any of the instructions accompanying the product are not carefully followed.

This limited warranty is made in lieu of all other warranties, expressed or implied, and is limited to the repair or replacement of the product. No warranty, expressed or implied, is extended concerning the completeness, correctness, or suitability of the Enabling Technologies Company equipment for any particular application. There are no warranties which extend beyond those expressly stated herein.

Enabling Technologies Company offers an Extended Warranty Program. For further details, contact:

> Enabling Technologies Company
> Service Contract Administrator
> 1601 Northeast Braille Place
> Jensen Beach, Florida 34957

For support and service within the United States, contact our Customer Support Group toll free at (800) 777 3687 or (772) 225 3687. For customers outside the United States contact your local Enabling Technologies distributor. They may be able to resolve your problem quickly on the phone. You may also contact us via email at: support@brailler.com.

If your problem cannot be resolved on the phone, request a Return Authorization (RA) number from the Customer Support Group. You MUST have an RA number before you can return your embosser to us for service. This number is necessary for us to schedule service time for your embosser.

After you obtain a Return Authorization number from Customer Support, pack your embosser in the original carton and packing material. If the original carton was discarded, use a container that provides at least three

inches of packing material around all sides of the embosser or call us to purchase new packing materials.

Include a letter inside the package containing the following information:

1. Your name.
2. Your company name (if applicable).
3. Your shipping address and zip code.
4. Your mail drop code (if applicable).
5. Your RA number.
6. A description of the trouble you are experiencing. Please include as much information as possible about the problem and the conditions under which it occurs.

Please have your RA number printed clearly on the outside of the carton so we can begin work on your embosser as quickly as possible. Address the box containing your embosser to the location below for quickest service:

Enabling Technologies Company
Customer Support
1601 Northeast Braille Place
Jensen Beach, Florida 34957 USA

Finally, before you ship your embosser, insure the package. We are not responsible for shipping damage, and the carrier is not responsible if the package is not properly packaged and insured. You could be charged for shipping damage if the embosser was not properly packed.